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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,466	10/23/2003	Eun Kyu Jang	139-011D	2570
23429	7590	11/23/2005	EXAMINER	
GREGORY SMITH & ASSOCIATES 3900 NEWPARK MALL ROAD, 3RD FLOOR NEWARK, CA 94560			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,466

Applicant(s)

JANG ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Non-Final Rejection (RCE)

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/28/2005 has been entered. Claims 1-6 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al (US 5,859,746) in view of Takasugi (US 6,351,351).

Claim 1, Ishida et al shows a flex interconnection circuit in Figs. 6 and 7 on a substrate Fb (Column 5, lines 48-49), including: a connector bonding site (above connector 32 in Fig. 7; column 7, line 12); an electronic component collection bonding site at marks 18a, 18b, and 18c (Column 7, line 19), at least one MR read-write head bonding site 16 (Column 6, line 43), the connector bonding site coupled to an electronic component collection bonding site through P13 (column 6, lines 44-46); and the electronic component collection bonding site coupled to at least one MR read-write head bonding site through P11 (Column 6, lines 42-43).

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Ishida et al does not specify IC as preamplifier.

Takasugi shows an interconnection circuit, wherein IC is a preamplifier (Column 7, line 9). It is also well known in the art that preamplifier is commonly used in interconnection circuit on the suspension, which is also always an IC. One of ordinary skill in the art would have been reasonably expecting the IC in Ishida et al's device includes a preamplifier.

Claim 3, the above constructed device includes a flex interconnection circuit including: a flex interconnection circuit substrate Fb, a connector 32 (Ishida et al's Fig. 7) bonded to the connector bonding site; the electronics component collection 18a, 18b, and 18c bonded to the electronics component collection bonding site including at least the preamplifier bonded to the electronic component bonding site; and at least one MR read-write head bonded to said MR read-write head bonding site; wherein the flex interconnection circuit couples the connector and the preamplifier; wherein the flex interconnection circuit couples the preamplifier the MR read-write head.

Claim 4, the above constructed device includes a second MR read-write head bonded to the MR read-write head bonding site (Column 2, lines 30-35); wherein the flex interconnection circuit couples preamplifier and second MR read-write head.

Claim 5, the above constructed device includes an actuator 5 (Fig. 1; column 5, line 40) including: a head slider 9 (Fig. 1) affixed with the MR read-write head of the flex interconnection circuit described above, the flex interconnection circuit anchored about the preamplifier to said actuator; and at least one binding of the flex interconnection circuit between said preamplifier and the read-write head.

Claim 6, in above constructed device, the actuator is inherently coupled by the connector to a disk drive controller printed circuit board.

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3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al in view of Takasugi as applied to claim 1 above, and further in view of Katsumata (US 6,826,016).

Claim 2, Katsumata shows an interconnection circuit in Fig. 14, wherein capacitors 96 is mounted on the trace (Column 10, lines 51-53), which can smoothen the power source (Column 1, lines 60-63).

Ishida et al show power line P3 (Column 6, line 51-52) in Fig. 7. One of ordinary skill in the art would have been motivated to add the capacitors taught by Katsumata onto the power line in Ishida et al's device in order to smoothen the power source.

Response to Arguments

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoax Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TIANJIE CHEN
PRIMARY EXAMINER